

CONSTRAINTS AND CASE STUDIES OF ADOPTION OF VEGETABLES BY TRIBAL FARMERS OF KEONJHAR DISTRICT OF ODISHA

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ABSTRACT

Constraint means some drawbacks or in efficiency in any type of Research. The Present Study envisages about Constraints and Some Case Studies of Adoption of Vegetables by Tribal Farmers of Keonjhar District of Odisha. Case Studies are the real story of both failure and success to act as a blue foot print to make research further. This is a quality intellect of Researchers for reflection of truths before Agriculture Scientists for Technology Advancement and Refinement through technology transfer and hi-tech adoption pattern. The Following Constraints and Case studies are illustrated with live discussion mode which was carried out in 2013 under the Sponsorship of OUAT, Bhubaneswar

KEYWORDS: Adoption, Constraints, Case Study, TAR

INTRODUCTION

Study of Various Constraints from the Respondents in Vegetable Cultivation

Vegetable cultivation requires all improved management practices for getting good yield. There is great variation in yield depending on all feasible situations. More risk is involved in vegetable cultivation due to climatic hazard, input supply, diseases and pest management, marketing and irrigation facility, poor transporting facility etc. Moreover vegetable cultivation synchronizes with other important farm activity which affects a lot in timely operations of different management practices. Grazing animal menaces, non- cooperation of the neighbors are many a time compelled farmers restrict him in vegetable cultivation irrespective of its profitability. Therefore constraints are differing from individual to individual depending on their social status, human resources as it is more labour infested, family obligation, cultural background as well as economic position.

The study is under taken to ascertain various constraints associated with vegetable cultivation in the study area. Constraints like social, organizational, technological, economical, management, policy support, organizational, advisory service, credit and miscellaneous etc. were taken into account for analyzing various constraints. The schedule was framed with three points continuum over the frame statements under these variables. Sufficient inter action were made by the researcher to collect factual information to arrived at conclusion and feasible recommendations collected information were analyzed both in terms of percentages and rank order by assigning weightage. The results of the findings are discussed herewith.

REVIEW OF LITERATURE

Sinha and Simla (1991): lack of knowledge of improved methods of cultivation and lack of proper guidance

were the important reasons for non-adoption of high yielding varieties of maize.

Kahlon and Singh (1992): stated that most physical constraint are likely to be influenced direct or indirectly by a single factor water control and water management

Krishnamurthy (1999): reported that non-availability of seeds and fertilizers (98.00%) in the cultural practices, lack of literature (98.00%) in the mechanical practices, non availability constraints expressed by the respondents.

Chrstainet al. (2005): reported that cotton growing farmers in Vadodara district of Gujarat had faced the major problems of timely availability of training on IPM (100%) and lack of skilled labour (70.00%). Similarly, the non-availability of plant production appliances, bio agents in time (47.50%) and high cost of plant protection input (98.33%) were the other constraints in the adoption of IPM.

RESEARCH METHODOLOGY

The Research Methodology is followed here for Identifying Constraints were Open Ended Interview Schedule and Visit method. Finally the interview schedule is incorporated with 5 point Likert Scale for qualitative research by making the questionnaire close ended. Case Studies were collected on live basis by using PRA methodology. Frequency, Rank Order and Percentage basic statistical tools were used here.

RESULTS AND DISCUSSIONS

Social problems are location specific and mostly concerned with individuals in a social system. In order to bring out some proposition for further improvement the author has to locate the constraints faced by the farmer.

Table 1: Social Constraints N=145

Constraints	Frequency	Percentage	Rank Order
1.Not Expose to society due to aboriginals	35	24.13	II
2.Ignored & neglected by Govt.	62	42.75	I
3.Love to remain as such without any introducer help	28	19.31	III
4.Illeterate & believe in Superstition	20	13.79	IV

The data presented in Table 1 Showed about various Social Constraints being expressed by the respondents of the study. Ignorance and negligence by Government Perceived as the top most constraints by the majority (i.e.42.75 percent) of the respondents which occupied rank one among all constraints. This was followed by other constraints in order of importance were “Not exposure to society due to aboriginals (24.13 percent), Love to remain as such without any introducer’s help (19.31) “it may line up due to PESA act 2000(People Extension Scheduled Act) as tribal’s remain in fifth Schedule area to which district belongs to.The final constraint of society was Illiteracy and believes in superstition (13.79 percent) and ranked two, three and fourth position respectively.

The findings of study therefore suggest that the extension functionaries working in the area should organize the farmer, make them conscious to increase their decision making ability makes them aware about its profit. So that, vegetable cultivation will be possible in larger scale with increase in production to meet the demand of the state

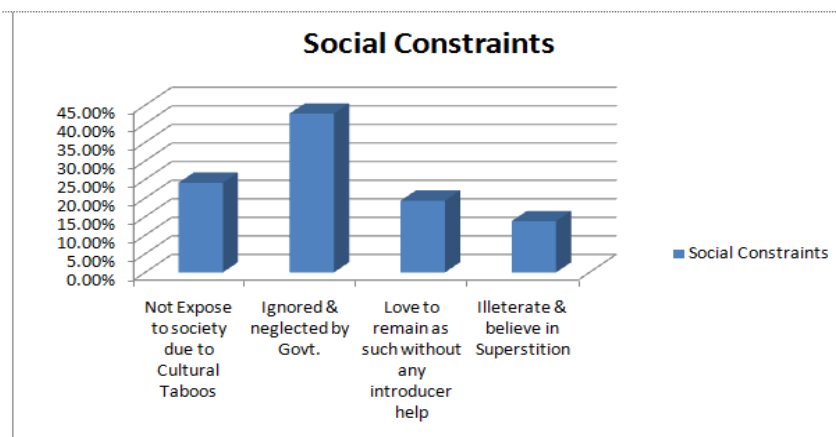


Figure 1: Distribution of Respondents According to their Response on Social Constraints

Transfer of technology is another important dimension in increasing knowledge and skill competency of growers. The growers must be sufficiently exposed to all technological development through extension approaches into practice. In assessing various constraints of technological aspects the following results are obtained as a reflected on the table 2

Table 2: Technological Constraints N=145

Constraints	Frequency	Percentage	Rank Order
No choice able variety	29	20	IV
More disease & pest attack	119	82.06	II
Severe weed infestation	126	86.89	I
Sophisticated management	21	14.48	VI
Insufficient skill to manage	46	31.72	III
Less knowledge	22	15.17	V

The data in the Table 2 showed that among all farmers, majority(82.06 percent) of respondents expressed that “Due to more disease and pest attack” they may not able to get good result in vegetable farming and it act as second most perceived constraints followed by top most constraint was “ Severe weed infestation(86.89 percent)” during rainy season in order of importance which ranked first and second respectively. The other important constraints in regular order were “In sufficient skill to manage (31.72 percent) followed by “No choicable variety (20 percent) and Less knowledge (15.17 percent) and other cause may be due to More Sophisticated management”that was 14.48 percent as per data.

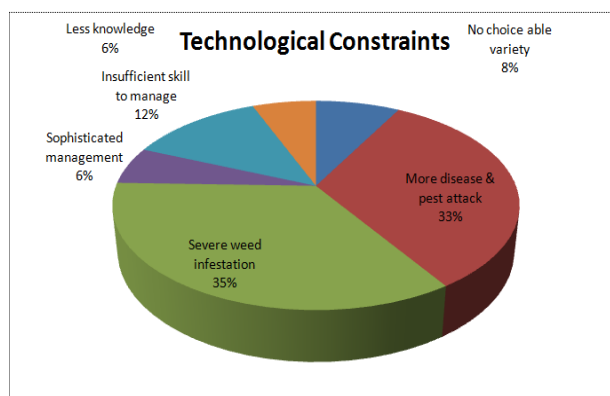


Figure 2: Distribution of Respondents According to their Response on Technological Constraints

Availability of required inputs in easy access of the growers is another important consideration before introducing any new ideas. In spite of all the favourable situations like ecological condition, technological support, marketing facilities, profitability etc. the vegetable growers may not develop any interest to raise any profitable crop if inputs are not available easily. Timely input supply, its quality, reasonable price etc. are the conditions for diffusion of new ideas. Therefore attempt was made in the study to assess the constraints on input supply system prevailed in the area. Information collected in this regard were analyzed and presented in Table 3.

Table 3: Constraints in Input Supply N=145

Constraints	Frequency	Percentage	Rank Order
1.Poor quality seed	43	29.65	I
2.Un timely available of Basic inputs	23	15.86	IV
3.Un reasonable seed price	29	20	II
4.Un availability of implements on custom hiring	10	6.89	VI
5.Un availability of required fertilizers	25	17.24	III
6.No authenticity in plant protection chemicals	15	10.34	V

From the Table 3 if we analyze about Constraints of Input Supply, we found that the first rank goes to Poor quality seed (29.65 percent) as because seed was the key factor for any cultivation. As per scientists, “good seed” envisages good production so this sector should be emphasized. The second rank also due to seed, but in terms of un reasonable seed price(20 percent),because of invade of middle man and Dalals. The third top constraint was “Un availability of required fertilizers(17.24 percent)”The other important constraints in order of Ranking were “Un timely availability of Minikits(15.86 percent)”, “No authenticity in Plant protection Chemicals(10.34 percent)” and the last but the least constraint was “Un availability of implements on Custom hiring(6.89 percent)” were occupied third, fourth, fifth, and sixth rank respectively.

The study therefore conclude that quality inputs should be supplied in time to the growers for removing all the constraints on input supply so that the farmers may develop interest to grow and continue Vegetable cultivation.

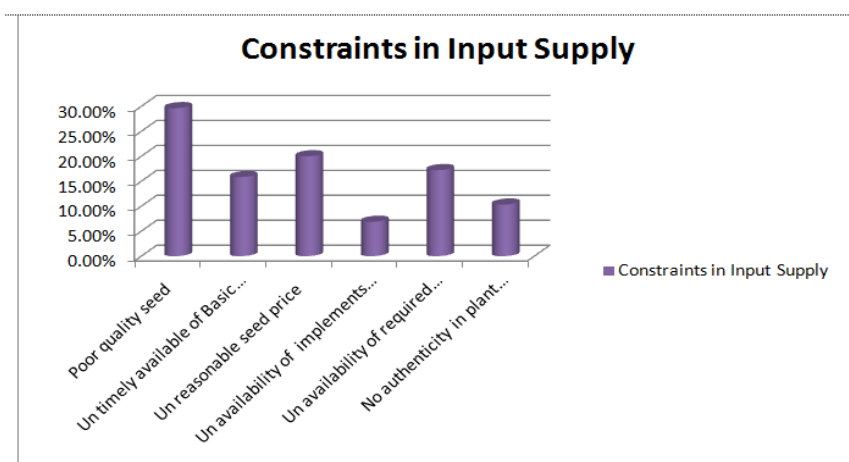


Figure 3: Distribution of Respondents According to Their Response on Constraints in Input Supply

Economical Constraint and Policy Support

Vegetable cultivation is usually labour intensive. The farmers was to invest more growing crops by arranging seeds, fertilizers, chemicals and other management operation. There risk is involved due to adverse climate condition. Many a time there is low market price and the farmer has no options as it is a perishable commodity. Therefore the vegetable growers need some financial assistance and incentives. The Govt. in his new Agricultural policy and National Horticultural Mission has made policies for insurance incentives subsidy and credit fertilizers. It seems that the extension functionaries working in the area might have not appraised the benefits extended to the vegetable growers.

The respondents did not supported for better distress sale rather suggested for better communication facilities and demanded for remunerative sale price The reaction of the respondents were analyzed and presented in table.

Table 4: Constraints in Policy Support N=145

Constraints	Frequency	Percentage	Rank Order
1.No support for vegetable crop input	38	26.20	I
2.No incentives	14	9.65	V
3.No crop insurance	19	13.10	IV
4.In sufficient credit facilities	31	21.37	II
5.Lack of easy disposal of produce	24	16.55	III
6.No remunerative sale price	19	13.10	IV

The Table 4 depicted that the majority of respondents (26.20 percent) were giving first rank to “No support for inputs in vegetable crops”. The second and third major constraints were “In sufficient credit facilities (21.37 percent)” and “Lack of easy disposal of Produce(16.55 percent)”.This line defined that Credit and sale were interrelated with each other i.e. More sale of products, credit may be repaid in time. Due to intermittent dry spell and heavy rain there may be chances of crop failure, but against it no crop insurance was there, as 13.10 percent respondents opined it. Another causes may be expressed by farmers were “No remunerative sale price (13.10 percent)” which yields “No incentives from sale (9.65 percent)” ranked fourth, fifth respectively.

The study therefore conclude that all the parameters contained in the table may be considered as important constraint and all possible remedial measures including crop insurance policy, incentive for motivate, price support for input, credit facility to be provided with vegetable cultivation, so that the growers can develop interest to go for vegetable cultivation.

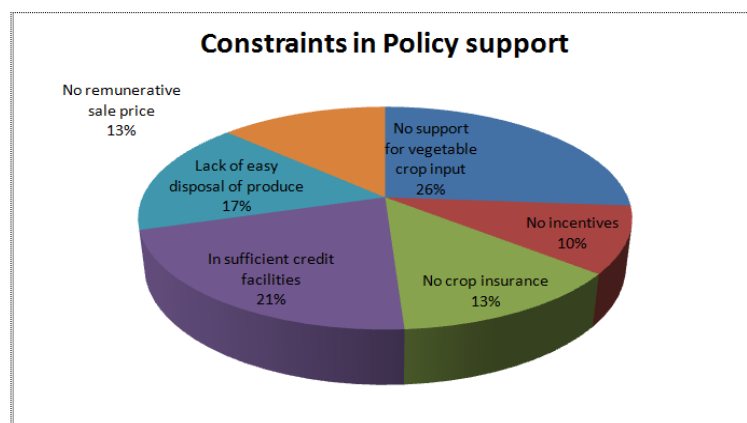


Figure 4: Distribution of Respondents According to Their Response on Constraints in Policy Support

Continuous flow of information to the growers is the essential criteria for successful raising of any enterprise. Therefore, easy transfer of technology is another important dimension which enriches knowledge and skill competency of the growers including behavioural change which in turn motivates the vegetable growers. The growers must be exposed sufficiently to the technological development through various extension methods for ensuring confidence on vegetable cultivation. In identifying various constraints on advisory services of the vegetables growers, the following results are obtained as reflected.

Table 5: Constraints in Advisory Service (Management Constraints) N=145

Constraints	Frequency	Percentage	Rank Order
1.Insufficient training	31	21.37	I
2.In adequate demonstration	20	13.79	IV
3.No exposure visits	25	17.24	II
4.Improper guidance	9	6.206	VII
5.In adequate supply of literature & bulletins	13	8.965	V
6.Lack of information	23	15.86	III
7.Lack of permanency in information flow	7	4.827	VIII
8.Problem & difficulties not taken care	5	3.448	IX
9.Irregular monitoring	12	8.275	VI

It was Clear from Table 5 that The majority of respondents(21.37 percent) were admitting that “In sufficient training” ranked one followed by second rank goes to “No exposure visits(17.24 percent)” Another reasons were “Lack of information(15.86 percent)”, “In adequate supply of literature & bulletins(8.965 percent)”, “Irregular monitoring(8.275 percent)”, “Improper guidance(6.20 percent)”, “Lack of permanency in information flow(4.027 percent)” and “Problems and difficulties not taken care(3.44 percent) ranked third, fourth, fifth, sixth, seventh, eighth & ninth respectively.

The findings lead to conclude that poor advisory services were extended to the farmers in the study area which will definitely restrict any new technology introduced.

It is therefore, suggested that all the advisory services mentioned in the table should be extended for changing the behavior of the people developing knowledge and skill competency and managing all operations smoothly through close monitoring and supervision in a participatory and friendship approach which will definitely make it possible for

popularization of vegetable growers.

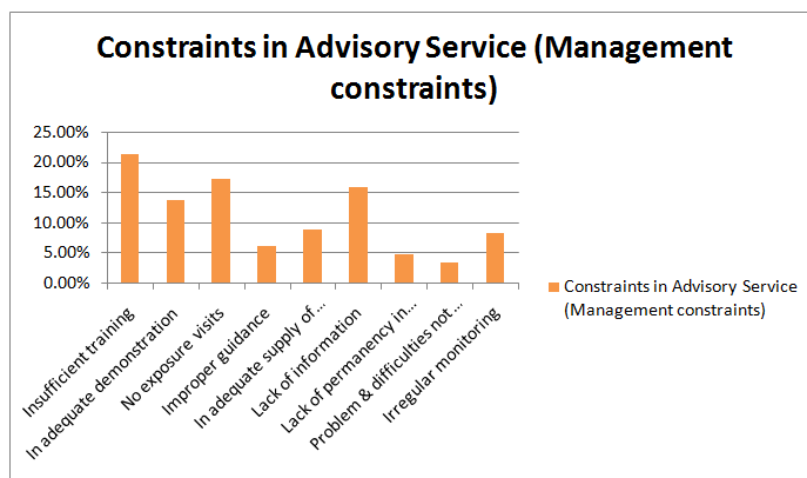


Figure 5: Distribution of Respondents According to their Response on Constraints in Advisory Services

In vegetable farming both harvesting and marketing stage is very crucial to earn a sound income. If any misappropriation occurs then market demand become low and more occurrence of financial loss. Hence we should maintain proper precautions.

Table 6: Constraints in Harvesting and Marketing N=145

Constraints	Frequency	Percentage	Rank Order
1.Low market demand	24	16.55	II
2.Unskilled labour for harvesting	18	12.41	V
3.Un timely rain	16	11.03	VI
4.Produce not lifted in time	12	8.27	VII
5.Harassment in lifting produce	5	3.44	VIII
6.Cost of production not considered in fixing sale price	21	14.48	III
7.Delaying in payment	20	13.79	IV
8.Harrashment in payment	29	20	I

The above Table 6 Shown about detailed constraints in Harvesting and Marketing. From which the first priority constraint was “Harrashment in Payment(20 percent)” followed by other causes were “Low market demand(16.55 percent)”, “Cost of Production not considered in fixing sale price(14.48 percent)”, “Delaying in payment(13.79 percent)”, “Un skilled labour for harvesting(12.41 percent)”, “Un timely rain(11.03 percent)”, “Produce not lifted in time(8.27 percent)” and “Harrasment in lifting Produce(3.44 percent) ranked two,three,four,five,six, seven and eight respectively.

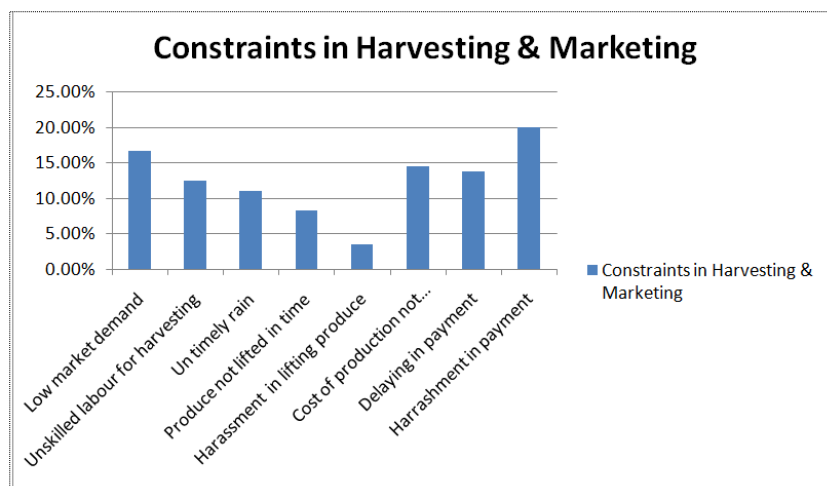


Figure 6: Distribution of Respondents According to their Response on Constraints in Harvesting & Marketing

In day to day life, we are mostly facing the transport related problems, marketing problems, storage problems and many more. If we take suitable measures we may be able to avoid it.

Table 7: Miscellaneous Constraints N=145

Constraints	Frequency	Percentage	Rank Order
1.Lack of transport facility & communication	32	22.068	IV
2.Lack of Processing Industries	45	31.034	II
3.Lack of storage facility	68	46.89	I
4.Lack of Marketability and related facility	50	32.41	III

The above Table 7 reflected the expression of respondents in terms of Miscellaneous constraints, amongst which rank one goes to “Lack of storage facility(46.89 percent)” because from many study we found that Storage facility should be emphasized for sound earning in off season, but 20 percent loss due to storage facility. Similarly another expressions submitted by respondents were “Lack of Processing Industries(31.034 percent)” because before storage if we processed the raw materials(Here Vegetables) we may preserve it for long days and use it when necessary so healthy money comes from value addition to it. Last and most important constraints found in every where was “Lack of transport facility and communication(22.068 percent). It imparts heavy returns from regulated markets as well as good communication yield smoother growth and development.

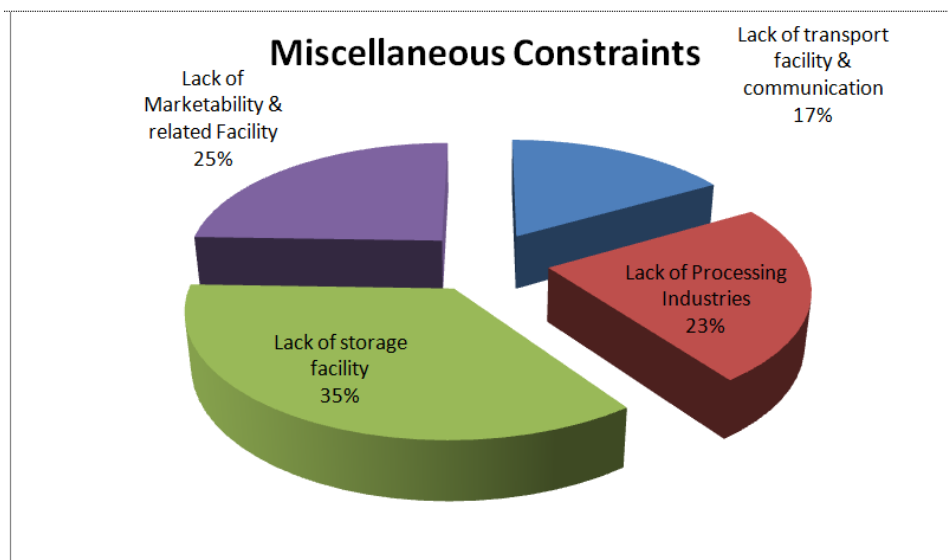


Figure 7: Distribution of Respondents According to their Response on Miscellaneous Constraints

Vegetable cultivation requires timely operation of all practices, timely availability of all inputs, effective supervision of extension functionaries and marketing facility for the produce are crucial steps in cultivation aspect. Constraints of vegetable growers were also collected, analysed and reflected in Table 8

Table 8: Organizational Constraints

Constraints	Frequency	Percentage	Rank Order
1.Officials involvement to tribal area in the advent of any crop season as per crop calendar is very negligible	35	24.13	III
2.Less stretching of voluntarily helping hand from NGOs,VSOs,Companies & Extension Agencies	42	28.96	II
3.In adequate govt. Support & guidance	68	46.89	I

From the above table 8 we may able to draw the kind attention of Government Ombudsman in terms of Government negligence in terms of organizational constraints and found to be highest in “Inadequate government support and guidance (46.89 percent) followed by “Less Stretching of helping hand to remote and tribal area by development organizations(28.96 percent) ranked second position as per the expression made by farmers.Similarly Government officials were hesitate to visit a tribal area due to their egoism or negligence in the advent of any season, so where less involvement, there is less includeness and less is the empowerment as opined by respondents were 24.13 percent by figure.

According to the findings obtained from the farmers who were facing much problem in availability of inadequate government support and guidance which should be considered with possible remedial majors.

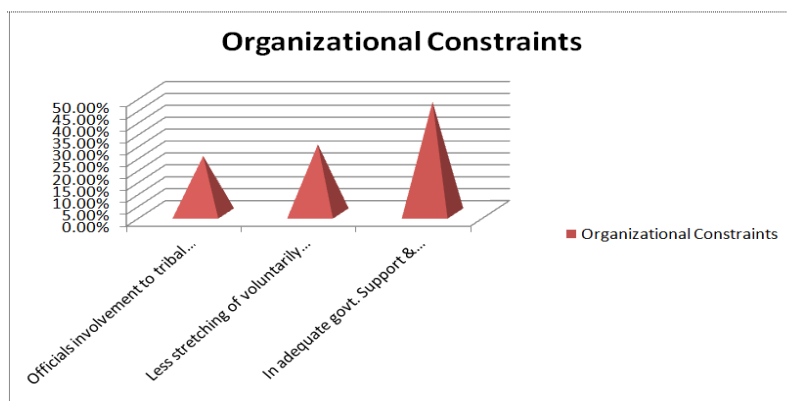


Figure 8: Distribution of Respondents According to their Response on Organizational Constraints

Now in the era of banking and finance, still some persons may not avail credits as per their need. The reason behind this may be due to complicated processing work and formalities of bank.

Table 9: Constraints in Getting Credit for Vegetable Cultivation from Banking Sectors, N=145

Constraints of Getting Credit	Frequency	Percentage	Rank Order
1.Cumbersome & complicated procedure	35	24.13	I
2.No land records	21	14.48	V
3.High rate of interest	29	20	III
4.No crop insurance against natural hazards	28	19.31	IV
5.Long credit processing time	32	22.06	II

This table 9 depicted about major constraints in getting credit from financial institution was “cumbersome and complicated procedure of banks”, 24.13 percent farmers agree with it followed by 22.06 percent in “long credit processing time “ and 20 percent believes in “high rate of interest”. So they were hesitating to take this facility may be the root cause for that. They were also not sanctioned credit from bank due to their improper land records(14.48 percent).

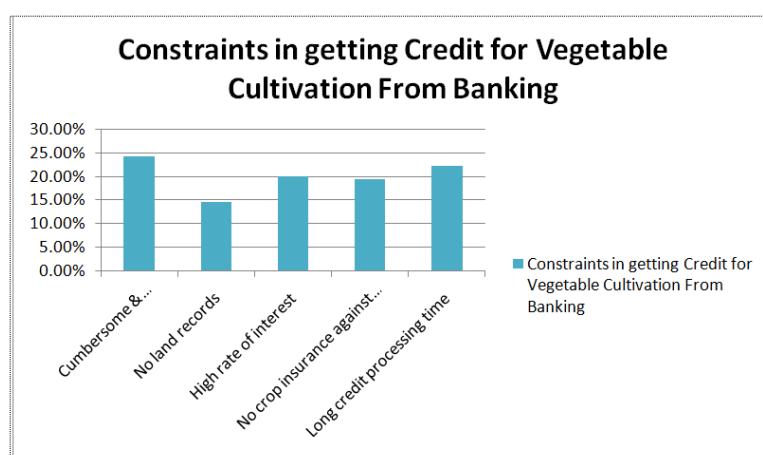


Figure 9: Distribution of Respondents According to their Response on Constraints in Getting Credit for Vegetable Cultivation from Banking

CASE STUDIES

Case Studies on Tribal Vegetable Farmers

Case Study No 1



Figure 10

Case Study of Tribal Vegetable Farmer

The Garden of Padma Lochan Naik

Padma Lochan Naik lives in a village named Baliaposi at Patna Block of Keonjhar district of Orissa. Baliaposi is a village of Gonds, one of the tribes in Orissa. The farming in Baliaposi as well as in Keonjhar depends on rain. Pradan has implemented a project on improving nutrition through home gardening in six villages of this block with support from ICEF land & livelihood project collaboration with P.I.A. PRADAN(NGO) in 2007 ~ 08.

Padma has 600 square feet of area in his home stead which he used to grow a few varieties of vegetables only in rainy season. He has a wife and two children. In winter and summer months the family used to buy vegetables from the market once in a week. The meager earning of Rs 30 /- as daily wage prevented them from buying vegetables regularly. The one drumstick plant in the homestead has been the only source of some form of greens for the family.

He along with three other farmers from his village had volunteered to be trial farmers to evolve solutions to be able to grow vegetables for at least eight months in a year from the present three months for household consumption. He had cited the lack of water, seeds and fence as underlying reasons for not being able to grow vegetables in rest of the months of the year.

PRADAN team has facilitated the first phase of four days training on nutrition garden in March 07 in the project villages. The emphasis was given on varieties of such vegetables and fruits for cultivation in a nutrition garden which are traditional, can tolerate water stress, germinate easily, require less care, whose crop might be harvested over a longer period of time and seeds can be conserved for next season. The participants were also trained on improving soil fertility and disease & pest management techniques to reduce their dependence on market for inputs.

The villagers learned during the training programme :

- To make vermicompost
- To make liquid Manure
- To plant circle garden
- To make compost pit



Figure 11

Padma made his own compost pit and pots of liquid manure to improve microbial activity in soil and botanical pesticide to control pests. He built 3 raised beds with an east ~ west direction of 100 square feet each and three circle gardens of 1 meter diameter. He along with others were provided with vegetable seeds by PRADAN collected from farmers. He has grown brinjal, bullet chilly, pumpkin, ridge gourd, cow pea, ivy gourd and cluster beans etc. in Kharif / rainy. He has also planted five papaya saplings in his home stead. A grown papaya plant yields fruits for 4 years at a stretch.

Thus the variety of vegetables grown in his nutrition garden increased from three – brinjal, ivy gourd and chilly to seven the rainy season & in summer Pumpkin, tomato. Unlike previous years he has conserved seeds of these vegetables. In August the second phase of training was facilitated with an objective to learn from the experience of the rainy season and plan for the winter season.

He found liquid manure to be very useful and easy to prepare without any expenses. So, he decided to prepare this in a cycle of five earthen pots of 20 liters each once in every 10 days for the winter vegetable crops. The four farmers of this village had prepared a common nursery in the fourth week of September to grow seedlings of tomato, chilly and brinjal saplings.

He planted two varieties of chilly, brinjal, tomato, marigold flowers and basil alongside the vegetable beds. He has grown other vegetables green peas, French beans, okra, spinach, coriander, cow pea and bunching onion etc. in the inner space of the beds. Marigold and basil play an important role as pest repellent.

He was helped to document the amount of his money, time, value of farm yard manure, water invested and crop loss due to disease & pest attack per 100 square feet of bed and the net output in terms of vegetable yield, income earned out of selling, amount consumed at house hold level / values, amount of vegetables shared with others and seeds harvested.

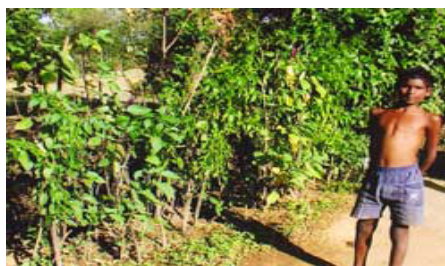


Figure 12

He is very happy to see his garden having vegetables grown even during winter and his family had vegetables almost every day from November to Mid February. He has shared his experience along with his calculation of input & output with other farmers from his village. The farmers have requested him to share his seeds with them as well as help them to learn the nutrition gardening.

Padma has also begun working to raise a productive live fence around his garden. The live fence has multipurpose bush, shrubs, climbers seasonal, annual and semi perennial plants etc. The live fence once grown provides fruits, vegetables, biomass for compost as well as security of the nutrition garden.

This project has intensively worked with 38 farmers. However, at the end of the year there were 96 farmers involved in nutrition gardening and sharing seeds amongst themselves. There were at least seventy farmers who were growing vegetables regularly for eight months in a year even in 2008. The process is farmer led.

CASE STUDY 2

Village Case Studies (By Rio Tinto Team)



Figure 13

Agriculture is possibly one common factor among all of OJV community, though with varied degrees of success and sustenance. The community largely practices one season shifting cultivation (podu). A fresh piece of land is cleared each season and coarse cereal seeds sown at random. A temporary dwelling is also created and the entire family shifts here to tend, care and protect the crop. Limited land is available around the community hamlets with scarce or poorly maintained water sources which makes sustained agriculture difficult. Rio Tinto team worked with three villages, Kankada, Barudiposi and Asanpat to introduce better agriculture practices. Initial attempts met with limited response; an SHG in Kankada showed some enthusiasm which allowed a start. Land selected was large while resources in terms of technique, manpower and water was limited. Regular meetings were held to engage the group into commencing work and it was agreed that vegetables would be grown, with Rio Tinto providing seeds and any other inputs required while labour and care / maintenance will be the responsibility of the SHG members. Financing was also negotiated by Rio Tinto assistance with a local bank and an initial loan of Rs. 20,000 was given to the SHG. The process of land leveling and creation of seedling bed went well. However given the poor technical knowledge, lack of expert advise was immediately apparent. This was addressed by engaging Prof. Samal who had recently retired from Krishi Vigya Kendra, Keonjar. This brought in scientific creation of seed beds and transplantation as also fertilizers and pesticides use over a period of time.

The SHG dynamics and lack of enthusiasm created issues even though substantial crops were harvested. At the end of the season, the SHG struggled to break even and the disappointment was obvious given expectation of returns for little effort.

CASE STUDY 3

Case Study of Marangburu Pumpkin Farmers Federation, Pahadpur, Jhumpura

Whenever there was darkness in Remote areas, a people's organization named "Marangburu Farmers Federation" showed light to the aboriginals, nude neglected tribal's with providing them a chance to survive with holistic approach in their area.

A decade ago Pahadpur area was full of forests. The peoples of this area mostly depend upon hunting, fishing and collection of forest products. They were very poor, illiterate and ignored from all Govt. Aid as it was in the remote pockets of Keonjhar Dist. But whenever Plan International & CYSD with their collaboration lunched a long term Project on Livelihood for Forest inhabitants, at that time Marangburu Farmers Federation was borne to promote Pumpkin Cultivation as the Primary initiative with some Underground vegetables like Colocasia (Taro) & relevant tuber crops for their food security & sustainable livelihood. Initially Tuber crops taken the heart of their life and now due to larger adoption & popularity of "Baidyabati" variety of Pumpkin, they were able to earn sound money from this business by sending Pumpkins in large scale with good price to various Parts of Northern Odisha like Jashipur, Thakurmunda, Bahalada, Jamda. From this Federation two farmers nominated for getting prize by CYSD on the occasion of its foundation day & also CYSD got first prize in "Adivasimela" in 2009 for this.

Now by the great effort of Marangburu Farmers Federation, three other S.H.G & one F.I.G. of this area and near by locality got the path of success in Vegetable cultivation to make their economic status uplifted and livelihood empowerment with a positive achievement in this century. 120 farmers get benefitted from this people's organization in terms of various technology adoption, right to information, exposures and getting inputs in right time from various sources. Some Seed banks, & grain banks were operated in this area by the help of this organization for their sustainability with good amount of thrifts & savings in this Federation as well as in Baitarani Gramya Bank(RRB).

Now the peoples are very happy to maintain their family with dignity by smoother operation in their livelihood, education & governance. After the advent of this organization, now many Govt. Projects were lunched in this area & NGOs also stretched their hands for any help to develop the Tribals. ITDA, JDA & OTELP finished their base line survey for implementing a Micro Nutri Farm Project in this locality soon.

Last but not the least, "Marangburu Farmers federation" showed the way of living to tribal's, hence praise worthy & Long live Marangburu Farmers Federation. The only Tribal icon organization.

CASE STUDY 4

Case Study of Lalita Dehury, a Successful Chilly Women Farmer of Patna Block

A young Lady of Ninhua village, under Turumunga G.P. of Patna Block become a tribal idol for the whole District by growing Chilly in large scale with care. Her care and labour today become a "Sweetest Fruit". Now she is very happy than her previous condition she had faced in past.

25 years Lalita is a Graduate of Anthropology & very poor by condition. Her marriage was held with a poor family in the age of 19. But, it was a matter of pity that her husband passed away in 21. So, she was the only one to struggle for her family to maintain livelihood. Her family members were 10. It was very difficult to maintain the basic needs at that time. So, at that peak period she took the advice of WOSCA (Womens Organization for Social Cultural Awareness), a leading people's organization in Keonjhar Dist. WOSCA provided all inputs for Vegetable cultivation in Kitchen Garden area. Initially she produced a remarkable yield from a small area. But after initial profit, she decided to do in large scale in the grazed forest land near to her garden. So, she took a crop loan from LAMPS, Turumunga and technical advises from WOSCA & Agriculture Dept., now she is an awarded & successful women tribal farmer of the District having good economic condition with high social status and become an example for neglected, ignored women. She had also guided 10 small farmers by becoming an active member of Maa Banadurga SHG, Ninhua. She has also keep an aim to complete MSW course and must open a Chilly Processing Unit for more profit as well as give employment to poor.

Finally last but not the least, the efforts of Lalita is actually Praise worthy. We must give her a big hand & Salute to her.

CASE STUDY 5

Case Study of Smt. Samari Munda, a Successful Tribal Women Farmer of Leafy Vegetables of Jhumpura Block

Case Study of Samari Munda, a leading leafy Vegetable Farmer of Tukudiha, Jhumpura Block showed the way to the "Munda" Tribal community in an innovative way. Being an illiterate lady farmer Samari was having very shyness. Whenever any type of meeting occurred in village she stood far away from that. But when BISWA NGO starts functioning on Livelihood & Microfinance, Samari was get touched with cluster level lady worker. Initially with a few investment she had started Leafy vegetable cultivation (Spinach, Koshala, Khada, Poi etc) & sold it in Jhumpura market on daily basis due to more demand by consumers. Now she had grown leafy vegetables in a large scale by becoming a member of "Munda Mahila Sevasangha, Tukudiha". She had deposited good amount in that Sangha and in nearby Bank i.e. Bank of India, Jhumpura. The success not only goes to her but her literate daughter & husband were encouraging for go ahead. Now all Munda families have been adopting leafy vegetables with other crops by the positive impact from Samari.

CASE STUDY 6

Story: Off season cabbage cultivation at Keonjhar

Keonjhar district is located at a higher altitude of 644mt above mean sea level. Cool climate prevailing in blocks like Jhumpura, Champua, Keonjhar Sadar, Telkoi, Banspal etc. are favourable for off-season vegetable cultivation, A farm woman Smt. Padmini Mundari of Chitrapur village in Jhumpura block owns one acre of arable land in which she cultivates maize in traditional method. Considering the prevailing climatic condition and market demand for cabbage, the farm woman was advised by the KVK to take up off-season cabbage cultivation.

She was trained on seed treatment, methods of raising off-season vegetable nursery, planting method and after care, boron application in cabbage and method of packaging harvested produce. The farm woman raised cabbage in her half acre of arable land. She adopted all the improved method of production such as raising of nursery in shade, planting seedlings at appropriate spacing, spraying of boron, balance nutrition and need based plant protection measures. From half acre of land, she harvested 30.25 qtl cabbage. Due to off-season, she sold the cabbage @ Rs. 15 per kg earned a profit of Rs.45,000 with an expenditure of Rs. 16,750. The main problem encountered during off-season cabbage cultivation was

difficulty in raising of nursery during rainy season. She was advised to raise nursery in raised bed, thus reducing seedling mortality. She is now planning to increase the area under off-season cabbage cultivation to improve her economic status.

CASE STUDY 7

Story: Off-Season Vegetable Cultivation by Tribal Ladies in Keonjhar

Agro-climatic condition of Keonjhar is considered favourable for vegetable cultivation. With growing demand, it was felt to go for off season vegetable cultivation, which promises a better economic margin. Major constraint for vegetable cultivation is unavailability of irrigation water. Farm women use to carry water from long distances to irrigate the crops. This caused unimaginable hardship and drudgery to the rural women.

The scientists of WOSCA, Keonjhar observed that irrigation was the major cause of drudgery and financial misery for the women. Training and demonstrations were conducted for various women groups of adopted villages like Rangadihi and Danla etc. Considering the topographical features, Krushak Bandhu pumps were supplied to farmwomen of Rangadihi village. It had proved to be more efficient than the prevailing methods of irrigation.

Off season vegetable cultivation was popularized in the villages through awareness campaign, training, FLD and OFTs. Smt. Manjubala Bhuyan of village Rangadihi of block Banspal in Keonjhar district usually cultivates vegetables in one acre during kharif season. By using KB pump, she had cultivated tomato in one acre, brinjal-0.50 acre and beans 0.25 acre during rabi and summer seasons. She got the yield of 80qtl soft tomatos, 30qtls of brinjal and 8qtls of beans with net profit of Rs.90, 000. After this success, she was motivated to invest in purchasing a pair of bullock at a cost of Rs.15. 000 and a diesel pump set worth Rs. 18,000. With these facilities, she can manage more area under vegetable cultivation.

CONCLUSIONS

Though the tribal farmers were aboriginals and their socio-economic status is very poor still in Keonjhar Dist., They were acting as Innovators in Adopter Categories by taking the Indegenous methods for success in their farming. By taking a Vivid eagle of eye from Constraints and Case studies my personal perception is that if Govt. take initiatives for them along with the stretch hand of NGOs, Young Researchers then the tribal farming community may uplift in a different mode of direction by spelling the development vision of 2020 to 205.

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